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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,989	02/05/2007	Kohei Nagayama	00684.109158.	2484

5514 7590 06/23/2010

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EXAMINER	
BRAY, STEPHEN A	
ART UNIT	PAPER NUMBER
2629	
MAIL DATE	DELIVERY MODE
06/23/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/552,989	NAGAYAMA, KOHEI	
	Examiner	Art Unit	
	STEPHEN A. BRAY	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 March 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1, 3-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

In an amendment dated, 3/25/2010, the Applicant amended claims 1, 4, 8-10, 12, and 14; and cancelled claim 2. Currently claims 1, 3-14 are pending.

Response to Arguments

1. Applicant's arguments, see Page 8, lines 13-21, filed 3/25/2010, with respect to the rejection(s) of claim(s) 1-14 under 35 USC 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Column 6, lines 6-47 of Ikeda et al (US 6,741,385) which discloses providing an insulating layer between the electrodes, where the insulating layer can be viewed as a resistive layer having a very high resistance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 3, 5, 7, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endo (WO 2004/044647) in view of Ikeda et al (US 6,741,385).

Regarding claim 1, *Endo* discloses an electrophoretic display device (Figure 1 of *Endo* discloses an electrophoretic display.), comprising:

a substrate (Figure 1 and Page 10, lines 6-18 of *Endo* disclose having a first substrate 1.),

a light-transmissive sealing plate (Figure 1 and Page 19, lines 6-14 of *Endo* disclose the second substrate 2 is made of a transparent material and thus acts as a light-transmissive plate.);

a partition wall disposed between a surface of the substrate and the sealing plate (Figure 1 and Page 9, line 24 through Page 10, line 14 of *Endo* discloses having a partition wall 7 disposed between the first substrate 1 and the sealing plate 2.),

a liquid layer, disposed in a container including the substrate and the partition wall, comprising electrophoretic particles and a dispersion medium (Figure 1 and Page 9, line 10 through Page 10, line 18 of *Endo* discloses having electrophoretic particles 6 disposed in an insulating liquid 5 located within a container formed by the substrate 1, the sealing plate 2, and the partition walls 7.),

a first electrode formed at a position apart from the partition wall on the substrate (Figure 1 of *Endo* discloses having a first electrode 3 disposed in the center of the display cell.),

a second electrode formed along the partition wall (Page 10, lines 7-10 of *Endo* discloses that the second electrode 4 can be formed on the surface of partition wall 7.), and

means for applying a voltage between the first electrode and the second electrode (Page 15, lines 7-15 of *Endo* discloses applying a voltage between the first and second electrodes. Therefore it is inherent that there is a means for applying a voltage connected to the first and second electrodes.),

Endo fails to teach wherein at the surface of the substrate defining part of the container, a resistance layer electrically connecting the first electrode and the second electrode is formed.

Ikeda et al discloses wherein at the surface of the substrate defining part of the container, a resistance layer electrically connecting the first electrode and the second electrode is formed (Column 6, lines 6-47 of *Ikeda et al* discloses forming an insulating layer 9 which covers and forms a connection between a first electrode and a second electrode. It is well known in the art that electrically insulating materials are highly resistive. Therefore the surface insulating layer can be considered to be a resistance layer which has a high resistance value.).

Therefore it would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the electrophoretic device taught by *Endo* with the teachings of *Ikeda et al* in order to form a display device with higher display contrast.

Regarding claim 3, *Endo* as modified above discloses a device according to claim 1 or 2, wherein the resistance layer is formed to cover the partition wall (Page 10,

lines 7-10 and Page 13, lines 23-27 of *Endo* discloses forming a surface insulating layer over the second electrode 4 formed on the partition wall 7.).

Regarding claim 5, *Endo* as modified above discloses a device according to claim 1, wherein the resistance layer is formed of a transparent material, and a light reflection layer is disposed opposite to the liquid layer through the resistance layer (Column 6, lines 6-47 and Column 7, lines 26-37 of *Ikeda et al* discloses forming the insulating layer out of a high-transparent polymide material and having the electrode upon which the insulating layer is formed act as a light reflection layer.).

Regarding claim 7, *Endo* as modified above discloses a device according to claim 1, wherein the first electrode is extendedly formed opposite to the liquid layer through the resistance layer and an insulating layer (Figure 3 of *Ikeda et al* discloses electrodes 5a and 5c which are formed through insulating layers 4 and 9, of which layer 9 could be called a resistive layer with very high resistance.).

Regarding claim 12, *Endo* as modified above discloses a driving method of an electrophoretic display apparatus of the type wherein the apparatus comprises:

a substrate (Figure 1 and Page 10, lines 6-18 of *Endo* disclose having a first substrate 1.);

a light-transmissive sealing plate (Figure 1 and Page 19, lines 6-14 of *Endo* disclose the second substrate 2 is made of a transparent material and thus acts as a light-transmissive plate.);

a partition wall disposed between a surface of the substrate and the sealing plate (Figure 1 and Page 9, line 24 through Page 10, line 14 of *Endo* discloses having a partition wall 7 disposed between the first substrate 1 and the sealing plate 2.);

a liquid layer, disposed in a container including the substrate and the partition wall, comprising electrophoretic particles and a dispersion medium (Figure 1 and Page 9, line 10 through Page 10, line 18 of *Endo* discloses having electrophoretic particles 6 disposed in an insulating liquid 5 located within a container formed by the substrate 1, the sealing plate 2, and the partition walls 7.);

a first electrode formed at a position apart from the partition wall on the substrate (Figure 1 of *Endo* discloses having a first electrode 3 disposed in the center of the display cell.);

a second electrode formed along the partition wall (Page 10, lines 7-10 of *Endo* discloses that the second electrode 4 can be formed on the surface of partition wall 7.), and

a resistance layer for electrically connecting the first electrode and the second electrode formed at the surface of the substrate defining part of the container (Column 6, lines 6-47 of *Ikeda et al* discloses forming an insulating layer 9 which covers and forms a connection between a first electrode and a second electrode. It is well known in the art that electrically insulating materials are highly resistive. Therefore the surface

insulating layer can be considered to be a resistance layer which has a high resistance value.);

the driving method comprising:

applying a voltage of one polarity between the first and second electrodes to move the electrophoretic particles to a surface of the partition wall (Page 15, lines 7-15 of *Endo* discloses applying +50 volts to first electrodes 3 and -50 volts to second electrodes 4 to generate a white display, i.e. move the particles as shown in Figure 1 (a).), and

applying a voltage of the other polarity between the first and second electrodes to move the electrophoretic particles to a surface of the resistance layer (Page 15, lines 7-15 of *Endo* discloses applying -50 volts to first electrodes 3 and +5 volts to second electrodes 4 to generate a black display, i.e. move the particles as shown in Figure 1 (b).).

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Endo (WO 2004/044647) and Ikeda et al (US 6,741,385) as applied to claim 1 above, and further in view of Lindsay et al (US 6,861,497) and Swidler (US 5,411,833).

Regarding claim 4, *Endo* as modified above discloses a device according to claim 1 (Column 6, lines and Column 7, lines 38-40 of *Ikeda et al* disclose that the insulating layer can be formed out of amorphous fluororesin, high-transparent polyimide, acrylic resin while the insulating liquid 2 can be made of isoparaffin, silicone oil, xylene, or toluene.).

Lindsay et al discloses the resistance value of the resistance layer (Column 2, lines 43-54 and the abstract of *Lindsay et al* disclose having a transparent polyimide material which has an electrical resistivity which ranges from 10^6 to 10^{16} Ohm-centimeters in value.).

Therefore it would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the electrophoretic device taught by *Endo* with the teachings of *Lindsay et al* in order to form a display device in which the insulating layer has a high resistance solvents and is easily processed into thin films.

Swidler discloses the resistance value of the liquid layer (Column 11, lines 44-68 of *Swidler* discloses having a silicon oil carrier liquid which has a volume resistivity of 10^9 to 10^{10} Ohm-centimeters in value.).

Therefore it would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the electrophoretic device taught by *Endo* with the teachings of *Swidler* in order to form a display device in which the liquid layer with not interfere with the electric field generated by the electrodes.

Therefore *Endo* in view of *Ikeda et al* and *Lindsay et al* and *Swidler* discloses the resistance layer has a resistance value smaller than a resistance value of the liquid layer ((Column 6, lines and Column 7, lines 38-40 of *Ikeda et al* disclose that the insulating layer can be formed out of a high-transparent polyimide material and the

insulating liquid 2 can be made of silicone oil. Column 2, lines 43-54 and the abstract of *Lindsay et al* discloses a transparent polyimide material having an electrical resistivity which ranges from 10^6 to 10^{16} Ohm-centimeters. Column 11, lines 44-68 of *Swidler* discloses having a silicon oil carrier liquid which has a volume resistivity of 10^9 to 10^{10} Ohm-centimeters. Therefore the resistance value of the resistance layer is smaller than the resistance value of the liquid layer.).

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Endo (WO 2004/044647) and Ikeda et al (US 6,741,385) as applied to claim 1 above, and further in view of Uno et al (US 6,727,883).

Regarding claim 6, *Endo* as modified above discloses a device according to claim 5.

Endo as modified above fails to teach wherein between the resistance layer and the light reflection layer, a coloring layer formed of an insulating material is disposed.

Uno et al discloses wherein between the resistance layer and the light reflection layer, a coloring layer formed of an insulating material is disposed (Figure 1 and Column 12, lines 35-47 disclose that colored layers 8a and 8b are formed between insulating layer 9 and first substrate 1a.).

Therefore it would have been obvious to one of ordinary skill in the art at the time that the invention was made to further modify the electrophoretic device taught by *Endo* with the teachings of *Uno et al* in order to form a display device in which colored images can be created without requiring the electrophoretic particles to be colored.

6. Claims 8-9, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endo (WO 2004/044647) and Ikeda et al (US 6,741,385) as applied to claim 1 above, and further in view of Goden (US 2004/0184136).

Regarding claim 8, *Endo* as modified above discloses an electrophoretic display apparatus, comprising:

a substrate (Figure 1 and Page 10, lines 6-18 of *Endo* disclose having a first substrate 1.),

a light-transmissive sealing plate (Figure 1 and Page 19, lines 6-14 of *Endo* disclose the second substrate 2 is made of a transparent material and thus acts as a light-transmissive plate.);

a partition wall disposed between a surface of the substrate and the sealing plate (Figure 1 and Page 9, line 24 through Page 10, line 14 of *Endo* discloses having a partition wall 7 disposed between the first substrate 1 and the sealing plate 2.);

a liquid layer, disposed in a container including the substrate and the partition wall, comprising electrophoretic particles and a dispersion medium (Figure 1 and Page 9, line 10 through Page 10, line 18 of *Endo* discloses having electrophoretic particles 6 disposed in an insulating liquid 5 located within a container formed by the substrate 1, the sealing plate 2, and the partition walls 7.),

a first electrode formed at a position apart from the partition wall on the substrate (Figure 1 of *Endo* discloses having a first electrode 3 disposed in the center of the display cell.),

a second electrode formed along the partition wall (Page 10, lines 7-10 of *Endo* discloses that the second electrode 4 can be formed on the surface of partition wall 7.),

wherein at the surface of the substrate defining part of the container, a resistance layer for electrically connecting the first electrode and the second electrode is formed (Column 6, lines 6-47 of *Ikeda et al* discloses forming an insulating layer 9 which covers and forms a connection between a first electrode and a second electrode. It is well known in the art that electrically insulating materials are highly resistive. Therefore the surface insulating layer can be considered to be a resistance layer which has a high resistance value.).

Endo as modified above fails to teach a plurality of data lines disposed on the substrate at a certain pitch,

a plurality of scanning lines and a plurality of constant-voltage lines, the scanning lines and the constant-voltage lines being disposed on the substrate at a certain pitch while intersecting with the plurality of data lines, and

a switching device and a capacitor which are disposed at each of the intersections of the data lines and the scanning lines, the capacitor holding a voltage depending on display data by supplying a sequential scanning signal to the scanning lines and supplying a data signal to the data lines and depending on the voltage held by the capacitor, a voltage or a current being applied between the first and second electrodes so as to move the electrophoretic particles to effect display,

Goden discloses a plurality of data lines disposed on the substrate at a certain pitch (Figure 5 discloses a plurality of data lines 13.),

a plurality of scanning lines and a plurality of constant-voltage lines, the scanning lines and the constant-voltage lines being disposed on the substrate at a certain pitch while intersecting with the plurality of data lines (Figure 5 discloses a plurality of scanning lines 12 and a plurality of constant voltage lines attached to one end of capacitor 11, both lines which intersect with the plurality of data lines 13.), and

a switching device and a capacitor which are disposed at each of the intersections of the data lines and the scanning lines, the capacitor holding a voltage depending on display data by supplying a sequential scanning signal to the scanning lines and supplying a data signal to the data lines and depending on the voltage held by the capacitor, a voltage or a current being applied between the first and second electrodes so as to move the electrophoretic particles to effect display (Figure 5 discloses switching device 10 and capacitor 11, where the capacitor holds charge supplied by data line 13. Figures 3(a) -3(c) and paragraphs [0089] - [0095] disclose that the voltage applied between the electrodes is based on the display pattern that is desired.),

Therefore it would have been obvious to one of ordinary skill in the art at the time that the invention was made to further modify the electrophoretic display taught by *Endo* with the teachings of *Goden* in order to form a display device in which changes in the display gradation level are reduced, thus improving the image quality of the display.

Regarding claim 9, *Endo* as modified above discloses an apparatus according to claim 8, wherein one terminal of the capacitor is connected with the first electrode, and a time constant defined by a product of an electric resistance between the first and second electrodes and a capacitance of the capacitor is longer than a one-field period in sequential scanning of the scanning lines (Paragraph [0081] of *Goden* discloses capacitor 11 is connected to the first electrode 4 and Figure 22 discloses that the time constant for the display is longer than the one-field period since there is almost no voltage decay during the one-field periods shown on the graph.).

Regarding claim 14, *Endo* as modified above discloses a driving method of an electrophoretic display apparatus of the type wherein the apparatus comprises:

a substrate (Figure 1 and Page 10, lines 6-18 of *Endo* disclose having a first substrate 1.);

a light-transmissive sealing plate (Figure 1 and Page 19, lines 6-14 of *Endo* disclose the second substrate 2 is made of a transparent material and thus acts as a light-transmissive plate.);

a partition wall disposed between a surface of the substrate and the sealing plate (Figure 1 and Page 9, line 24 through Page 10, line 14 of *Endo* discloses having a partition wall 7 disposed between the first substrate 1 and the sealing plate 2.);

a liquid layer, disposed in a container including the substrate and the partition wall, comprising electrophoretic particles and a dispersion medium (Figure 1 and Page 9, line 10 through Page 10, line 18 of *Endo* discloses having electrophoretic particles 6

disposed in an insulating liquid 5 located within a container formed by the substrate 1, the sealing plate 2, and the partition walls 7.);

a first electrode formed at a position apart from the partition wall on the substrate (Figure 1 of *Endo* discloses having a first electrode 3 disposed in the center of the display cell.);

a second electrode formed along the partition wall (Page 10, lines 7-10 of *Endo* discloses that the second electrode 4 can be formed on the surface of partition wall 7.), and

a resistance layer for electrically connecting the first electrode and the second electrode is formed at the surface of the substrate defining part of the container (Column 6, lines 6-47 of *Ikeda et al* discloses forming an insulating layer 9 which covers and forms a connection between a first electrode and a second electrode. It is well known in the art that electrically insulating materials are highly resistive. Therefore the surface insulating layer can be considered to be a resistance layer which has a high resistance value.);

a plurality of data lines disposed on the substrate at a certain pitch (Figure 5 of *Goden* discloses a plurality of data lines 13.);

a plurality of scanning lines and a plurality of constant-voltage lines, the scanning lines and the constant-voltage lines being disposed on the substrate at a certain pitch while intersecting with the plurality of data lines (Figure 5 of *Goden* discloses a plurality of scanning lines 12 and a plurality of constant voltage lines attached to one end of capacitor 11, both lines which intersect with the plurality of data lines 13.); and

a switching device and a capacitor which are disposed at each of the intersections of the data lines and the scanning lines, the capacitor holding a voltage depending on display data by supplying a sequential scanning signal to the scanning lines and supplying a data signal to the data lines and depending on the voltage held by the capacitor, a voltage or a current being applied between the first and second electrodes so as to move the electrophoretic particles to effect display (Figure 5 of *Goden* discloses switching device 10 and capacitor 11, where the capacitor holds charge supplied by data line 13. Figures 3(a) -3(c) and paragraphs [0089] - [0095] disclose that the voltage applied between the electrodes to move the electrophoretic particles is based on the display pattern that is desired.);

the driving method comprising:

sequentially scanning the scanning lines to apply a voltage of one polarity between the first and second electrodes to move the electrophoretic particles to a surface of the partition wall (Figure 14(a) and paragraph [0124] of *Goden* discloses applying a voltage Va to the first electrode 4 and a voltage Vcom to the second electrode 5 and a voltage Vc to the third electrode 6 to move the electrophoretic particles to the partition wall 7.), and

sequentially scanning the scanning lines to apply a voltage of the other polarity between the first and second electrodes to move the electrophoretic particles to a surface of the resistance layer (Figure 14(b) and paragraph [0124] of *Goden* discloses applying a voltage Vb to the first electrode 4 and a voltage Vcom to the second

electrode 5 and a voltage Vc to the third electrode 6 to move the electrophoretic particles to collect along the bottom of the display cell.).

7. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endo (WO 2004/044647) and Ikeda et al (US 6,741,385) and Goden (US 2004/0184136) as applied to claim 8 above, and further in view of Asano et al (US 2004/0070557).

Regarding claim 10, *Endo* as modified above discloses an apparatus according to claim 8.

Endo as modified above fails to teach an apparatus further comprising a drive voltage line, disposed at the surface of the substrate, electrically connected with the first electrode, and means for controlling a current flowing between terminals of the connected drive voltage line and the first electrode depending on the voltage held by the capacitor.

Asano et al discloses an apparatus further comprising a drive voltage line, disposed at the surface of the substrate, electrically connected with the first electrode, and means for controlling a current flowing between terminals of the connected drive voltage line and the first electrode depending on the voltage held by the capacitor (*Asano et al* discloses in Figure 12 an active matrix driving means in which there is a transistor 112 connected to voltage VCC1 with a capacitor 113 connected between voltage VCC1 and the gate of transistor 22. When transistor 111 is on, the data voltage is stored in capacitor 113. When transistor 111 is turned off, the data voltage stored in

capacitor 113 is used to control the current flowing through transistor 112. Even though the display element being driven is electroluminescent, the same principles can be applied to other active matrix display devices.).

Therefore it would have been obvious to one of ordinary skill in the art at the time that the invention was made to further modify the electrophoretic display taught by *Endo* et al with the teachings of *Asano et al* in order to create an active matrix electrophoretic display in which irregularities in the manufacture of the controlling transistors can be accounted for.

Regarding claim 11, *Endo* as modified above discloses an apparatus according to claim 10.

Endo as modified above fails to teach wherein the apparatus further comprises means for compensating a fluctuation in current flowing between the terminals (Figure 2 and the abstract of *Asano et al* discloses an active matrix driving circuit which can accurately compensate each pixel for threshold voltage irregularities, thus preventing fluctuations in the drive current provided by drive transistor 22.).

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over (WO 2004/044647) and Ikeda et al (US 6,741,385) as applied to claim 12 above, and further in view of Ikeda (US 6,239,896), hereafter known as Ikeda '896.

Regarding claim 13, *Endo* as modified above discloses a method according to claim 12.

Endo as modified above fails to teach wherein after the electrophoretic particles are moved on the surface of the partition wall or the surface of the resistance layer, a period during which the voltage between the first and second electrodes is substantially zero is provided.

Ikeda '896 discloses wherein after the electrophoretic particles are moved on the surface of the partition wall or the surface of the resistance layer, a period during which the voltage between the first and second electrodes is substantially zero is provided (Figures 7A, 7B, and 7CA - 7CD and Column 12, lines 52-60 of *Ikeda '*896 disclose that in time period T5, after the display has been rewritten in time periods T1-T4, a ground voltage equal to zero is applied to each of the electrodes).

Therefore it would have been obvious to one of ordinary skill in the art at the time that the invention was made to further modify the electrophoretic display taught by *Endo* et al with the teachings of *Ikeda '896* in order to create an electrophoretic display which has a threshold characteristic and a memory characteristic.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEPHEN A. BRAY whose telephone number is (571)270-7124. The examiner can normally be reached on Monday - Friday, 9:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, AMR AWAD can be reached on (571)272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/STEPHEN A BRAY/
Examiner, Art Unit 2629

/Amr Awad/
Supervisory Patent Examiner, Art Unit 2629

19 June 2010